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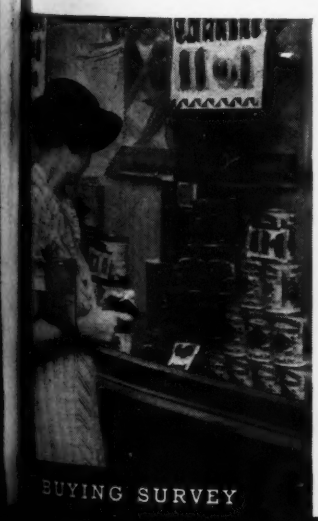
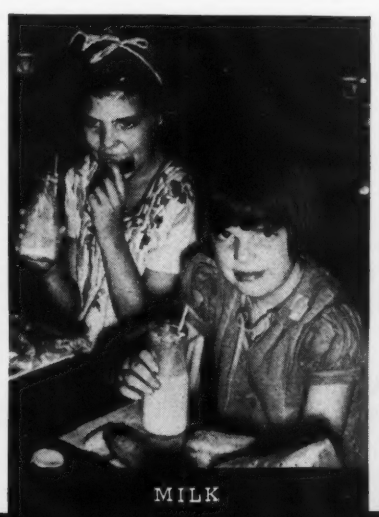
CONSUMERS' GUIDE

MARCH 15, 1940



BUYING SURVEY



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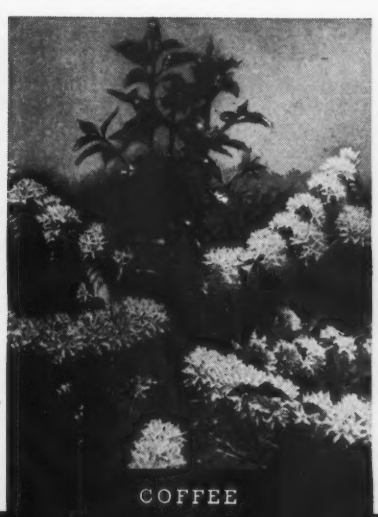

COFFEE

FOOD SUPPLIES

CONSUMERS' GUIDE

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MARY TAYLOR, Editor

PEOPLE WHO SEE the little man who isn't there have nothing on other people who see qualities in products that aren't there.

Sugar, for example, that is, the table sugar consumers hand around when someone says pass the sugar please, is a highly standardized product.

The sugar on the table, cane or beet, whichever kind it happens to be, is practically 100 percent pure sucrose. If there should happen—which is very unlikely—to be some difference between brands in the purity or sweetness of the product, only a chemist could detect it though there may be some difference in the fineness of the grain.

Yet recently when a group of students in Chicago employed on a National Youth Administration project went out and asked 10,325 Chicago consumers what brands of sugar they bought and why, 212 of the housewives said they bought their favorite brand because it was sweeter.

Each of these 10,000 or so housewives expressed a first preference for one of some 13 different brands of sugar. Most preferred their brand because it was "pure." The next most popular reason given for preferring a particular brand was that it was "popular." Approximately 1,500 housewives gave "price" as the reason for their preference, others said their favorite brand "dissolved quickly," that it was the "best on the market," that they could "use the carton for other things," and that it had "finer grains."

Housewives also had a chance to put on the record their preference for the various brands of coffee, tea, flour, hand soaps, scouring powders, and canned pears and peaches.

They had 33 favorite brands of coffee, 23 favorite brands of tea, 21 favorite brands of flour, 21 preferred hand soaps, 22 different kinds of scouring powder they swore by, 25 different first choice salad dressings, 34 brands of canned pears that commanded their loyalty, and 30 different favorite brands of canned peaches.

In each case, more than 90 percent of the housewives gave reasons for their first choice. They preferred the flavor, or the taste, or the deliciousness, or the mildness, or the fragrance, or the texture, or the purity, or the price of their favorite brand.

Two subjects which many consumers regard as extremely important were also dealt with in the survey. First, the Chicago housewives were asked "Do you favor use of labels on all goods to indicate quality, so that you may know what you buy?"

"Yes," said 4,184, or 41 percent, of the consumers questioned.

"It isn't important," 1,210, or 12 percent, said.

A plurality—4,931 housewives, or 47 percent—replied, "Not interested."

On the other hand, a majority, 5,761 indicated that they were in favor of standard-sized cans for canned foods. Approximately 36 percent, 3,670, weren't interested in standard cans, while 894 consumers, 9 percent, didn't think the question important.

People differ on what surveys like this one mean, but despite the differences of opinions, advertisers, newspapers, and other enterprises in the business of advertising and selling undertake them (they call this kind of activity market research) at vast expense in the belief that this information is essential to a successful selling campaign.

Consumers on the other hand can use market surveys themselves. From them they may learn how they go about buying, and from that information they can proceed to find out how they can improve their buying practices. Teachers of classes in consumer problems may find out from these surveys what kind of consumer education is needed.

One advantage a market survey has is that consumers, themselves, can conduct them on a small scale. They make interesting projects for consumer study groups and they throw light, sometimes, on queer buying quirks consumers never suspect themselves of having.

Consumers who want to know more about the labels on canned foods which tell the quality of the contents should read *Consumers' Guide* of March 1, 1940. Information on standard can sizes for canned foods and why they are important is contained in the August 1939 issue of the *Consumers' Guide.*

SCRAP IRON TODAY has a sinister ring because of its use in munitions, but scrap iron is used to build up red blood as well as to spill it. Of course the kind the body uses is a different form than the material for war. An article in the current Yearbook of Agriculture, *Food and Life,* points out that the human body, like industry, uses iron over and over again, and that the iron the body gets in a well-balanced diet is put to work new, second-hand, third-hand—many times. There is just a little more iron in the body than there is in a shingle nail, but this sliver of iron is an essential ingredient of the red coloring matter of the blood. It enables the blood to carry the oxygen the body needs to all its living cells. Eventually, the cells break down, but an intricate mechanism salvages the iron from the cells so that it can be stored in the liver. From there it is carried to the bone marrow as needed where new living cells are produced each with its charge of iron.

The body reworks iron so efficiently that some authorities say it needs to get from food only one-sixth of the total amount of iron it uses each day in the manufacture of living cells. The rest of the iron is reclaimed from the body's own scrap heap.

Even so, a great many people do not get enough iron in their diet to supply all they need. A regular and adequate intake of it is necessary. Among the better-than-average dietary sources of iron are most of the green-colored vegetables, lean meats, poultry, eggs, oysters and shrimps, whole-ground cereals, molasses, and liver, heart, and kidneys.

Consumers who like prospecting for nuggets of wisdom about the feeding of human beings and animals will find a rich mineful in *Food and Life*, the 1939 Yearbook of Agriculture, copies of which can be purchased from the Superintendent of Documents, Washington, D. C., for $1.50 a copy.

For pictures on New York, our thanks go to the Army Air Corps, Farm Security Administration, and the Pennsylvania Railroad; for coffee, to the National Coffee Department of Brazil, and the Pan American Union.

BUYING SURVEY

The Physiology of a Great City

It takes the regular, continuous, and efficient cooperation of hundreds of thousands of farmers, transportation agencies and workers, handlers, and dealers to supply a great modern city with food. A break in that continuous chain of activity would bring incalculable harm both to consumers and farmers

TOOTHACHES TURN A MAN'S mind to the blessedness it is to be without a toothache, and it takes a broken arm for a man to appreciate the state of grace a whole arm affords.

Penny wisdom of the same order has its applications to the economic anatomy.

Most often New York City is as little aware of up-State New York, Alabama, Iowa, and Arizona as a human being is of (1) his flexor-brevis-digitorum-pedis muscle, (2) his pineal gland, (3) his levator labi superiori alaeque nasi, or (4) his suprarenal gland.

Something must go wrong with these glands or muscles before most people get on speaking terms with them, and in the same way people in a great city pay practically no attention to the muscles and glands in their economic anatomy until they twinge.

New Yorkers got a toothache-like signal last summer, for example, when the milk supplies from up-State New York began to fail.

Again occasional twinges remind New Yorkers sometimes that drought has affected lettuce in Arizona, or that fungus has attacked peaches in Georgia, or that a shortage of corn has brought on something acute in the way of meat supplies in Iowa.

In 1921, New Yorkers, told that an interruption in transportation threatened, took the news the way a man might if he were told he was in imminent danger of a paralytic stroke. Fearsomely they began to think about their economic body and to wonder what life would be like paralyzed.

The interruption never took place, fortunately, but a subsequent study by the Port Authority of New York showed clearly the trouble New York would have been in.

Fresh milk would have evaporated over night.

Enough cases of butter, however, were stacked up in storage then (it was the peak of butter storage season) to last 30 days.

Evaporated milk supplies, held by retailers, wholesalers, and in warehouses would have lasted from 4 to 6 weeks.

Grain was stored in sufficient quantities to last 30 days. After that bread and cereals would have disappeared from the tables of New Yorkers.

Fresh meats were racked up in cold storage in quantities large enough to supply steaks and stews and roasts for 6 to 8 days.

Potatoes, bananas, citrus fruits, apples, pears, and similar commodities would have lasted some time, but most fresh fruits and vegetables would have disappeared overnight like milk.

Cold storage facilities, however, held ample supplies of eggs—enough for 3 months; dressed poultry, too, was ample enough to keep chickens in most pots for 30 to 60 days.

Had the threatened stoppage occurred in 1921, it would have exhausted fish supplies except of salmon, before the clock went around once.

Sugar would have lasted for 2 to 3 weeks.

Coffee, tea, and spices would have lasted indefinitely since New York is a major warehousing and distributing center for these products.

Enough canned fruits and vegetables are shipped into New York at the end of the canning season late in the fall to last a full year.

Dried peas and beans similarly would have lasted through most of the year.

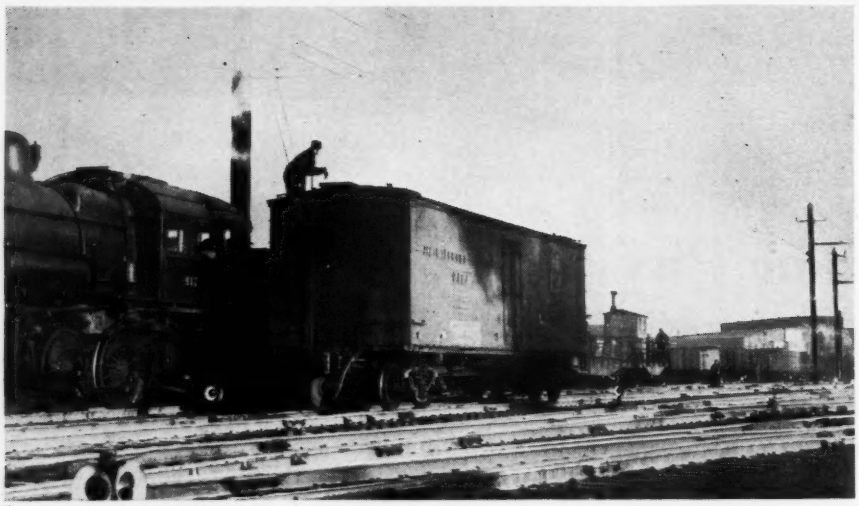
Finally, vegetable oils and compounds would have lasted from 30 to 60 days.

IF YOU WANT A FRESH VIEW OF THE WORLD, a writer once said, stand on your head and look at it carefully. That's called fresh perspective.

For a fresh perspective of New York (or any other urban center), however, there is another way of looking at the city. Instead of standing in the center of the town and regarding it as a city scene in Neon reds, Edison yellows, and smoke grays, try looking at it as the massive brain of an organism with a thousand reticulated arteries and nerves running through it.

Then if you try to ascertain the kind of blood that flows in the arteries, and the kind of impulses that tingle through the nerves, you will see that New York is a body fed by a half million full time farmers and farm workers. They pump the produce of 26

IT TAKES a half-million farm workers putting in a full day every day of the year to feed and clothe New York's consumers.



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NEW YORK'S FOOD MARKET begins at "the hump" for 500 freight cars full of fruit and vegetables each day. Trains loaded with these foods for New York City are broken up at this elevated switching point (picture 1) in the Jersey Yards, across the river from the tall-towered Manhattan Island. From there cars coast down toward the Hudson River for floating across to the Manhattan piers on flat-bottomed, tug-propelled barges (picture 2). On the New York side, husky stevedores and porters break open car seals and haul the produce along a runway (picture 3) into a huge arc-lighted terminal shed for display.

million acres of land into New York City each year.

More than 28 million hens are needed to produce the 235 million dozen eggs New Yorkers eat each year. A herd of 1¼ million cattle go under the butcher's knife so New Yorkers can have their annual supply of beef; 1½ million calves, 3½ million hogs, and 5½ million sheep and lambs. It takes 2½ million cows to produce the 10 billion pounds (in terms of milk equivalent) of dairy products New Yorkers ingest.

By train, truck, and boat each year some 5 billion pounds (202,000 freight carloads) of fresh fruits and vegetables are routed into New York.

WASHINGTON STREET MARKET IS THE BOTTLENECK through which 75 percent of these fruits and vegetables pass.

Each night the Washington Street Market undergoes a regular paroxysm. An average of 500 carloads of fresh fruits and vegetables a night pass through the New York market. On the eve of June 6, 1939 (to take a day) something more than 500 carloads of produce were delivered into New York: 133 carloads by truck, about 300 by boat, and the rest by freight. Trucks, 1,500 of them, jammed into the Washington Street Market.

There in an area 10 blocks long and 2 blocks wide are streets with space enough to accommodate 400 trucks. The trucks jammed from curb to curb, 3 abreast, unload their cargoes of food each night. Under the glare of street lights, men wheel hand trucks up and down the streets, threading their way between the traffic stalled trucks, unloading trucks from Georgia, Florida, North Carolina, Virginia, Pennsylvania, Ohio, and New York, while other men attempt to load city trucks waiting to haul produce to local stores and markets.

On the sidewalks beneath street-long canopies strung by wires from the half-century old buildings lining the streets, piled boxes of produce are heaped 2-men high. Between the piles of produce there is a narrow walk left, so that the sidewalk is hardly more than a catwalk between breastworks made of flat boxes of produce.

Crowds jostle between the high trenches of boxed fruits and vegetables. A worker pushing a hand truck loaded with a half dozen boxes of strawberries ploughs through buyers from chain stores, from corner grocery stores, pushcart peddlers looking for their day's supplies, buyers from hotels and restaurants.

Occasionally the buyers stop to inquire a price or to haggle with the white-coated produce dealers. When a deal is made, the dealers hastily make out a bill in triplicate, give one to the buyer, send one to a cashier, and attach one to the produce sold.

The buyer then threads his way between the piled produce inside the store front,

pays the cashier, obtains a receipted bill, and, returning, shows the bill to a man with a hand truck. The porter loads the produce on his truck, obtains the license number of the buyer's truck, and then slowly trundles off through the mill of trucks and crowds to deliver the produce.

Unloading from trucks takes place in the Washington Street Market, but most of New York's fresh fruits and vegetables still arrive by rail.

ALL DAY REFRIGERATOR AND FREIGHT CARS arrived in the Jersey yards across the Hudson River. On arrival, switch engines chugged back and forth breaking up trains, cutting out cars, and then nudged them one at a time up to the hump in the yards, an elevated switching point. For a moment the cars tremble on the hump, and then another final nudge sends them coasting down through the framework of tracks toward the Hudson River.

At the bottom of the incline another yard engine bumps the cars about, pushes them around some, and then urges them onto flat boats, 8 to 20 cars to a float. By early evening tugboats maneuver their way between the barges, tie up to them, and then the waters of the Hudson swirling around them, barge and the tugboat, they swish across the river to the New York side where thousand-foot-long piers finger out into the water current. More maneuvering and finally the barges, loaded with cars, are lined up between the piers. Gangplanks are fitted into place. Swarms of workers trundle hand trucks up the pier to the cars, break open seals, push back the doors to release a blast of ice-cold air. Then, with back muscles straining, biceps tensing, leg muscles tightening, the men who do the work of unloading begin.

Fitting themselves between the shafts of their hand trucks, like human burros, the stevedores wheel the loaded hand trucks down the piers and into a great freight terminal, lighted by a spotlight, hung from steel-girdered ceilings.

In the arc light an occasional sea gull, bewildered by the lights, flutters its wings overhead. The stevedores unload their hand trucks and stack the produce in piles for sale.

Some of this produce is sold from these piles by wholesalers (carlot receivers) directly to buyers; some of it is piled up for inspection and sold later in the morning at auction.

Once sold, it is piled onto trucks or wagons pulled by horses, and hauled out of the terminal to go either a couple of blocks to the wedged traffic of the Washington Street Market, or else to buyers' trucks waiting outside the terminal.

Each year the tugging and hauling, the carrying and cross carrying, the catch-as-catch-can wrestling with fruits and vegetables from the time they arrive in New York until they reach the retailer, costs some $40,000,000. Of this, $2,000,000 represents spoilage and deterioration which could be eliminated in a more efficient market. About $17,000,000 goes for trucking, hauling, loading, and unloading, and a good part of this could be saved.

It costs 1½ billion dollars to market the billion dollars (farm prices) worth of fruits and vegetables produced in the country each year. Many people with an expert knowledge of the marketing of these products think this cost should be reduced. They wonder whether more fruits and vegetables could be delivered to more people at a lower total price with a higher return to farmers if bottlenecks like the Washington Street Market underwent some kind of corrective operation.

EACH WORK-DAY MORNING produce dealers, grocers, chain-store buyers, and hotel and restaurant operators assemble in the terminal auction rooms and bid furiously (picture 4) on the produce displayed downstairs on the terminal concourse. Knocked down at auction to the highest bidder, the produce on display is then loaded in drays and hauled anywhere from 50 yards to 2 blocks either to buyers' trucks or to the Washington Street market (picture 5). The fruit and vegetable bottleneck of New York City is the Washington Street Market, through which 75 percent of the 5 billion pounds of fruits and vegetables New York consumes annually must pass. It costs 40 million dollars annually to handle fruits and vegetables from the time they arrive in New York until they get to the retailer. A good part of this sum is lost in the hauling, the cross-hauling, and the confusion of the Washington Street Market (picture 6).

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At the present time, with some such operation in mind, an informal committee of experts from the United States Department of Agriculture and from 3 or 4 State and city agencies is looking over the Washington Street Market.

IF SOME UNUTTERABLE (AND TOTALLY UNlikely) calamity should strike New York and cut off all the arteries that feed it food, there would be a double-edged disaster that would make Jeremiah look like an optimist.

How much food would be available in New York City was described accurately enough in the recapitulation of the Port Authority report on the threatened transportation tie-up of 1921. To bring that material down to date, suppose such a calamity had occurred during the night of June 5, 1939, which, the Weather Bureau says, was a beautiful clear night lighted by a silver scythe-like quarter moon.

The disaster would have left only 1 day's supply of milk in the city.

Menus on June 6 would have included all the fruits and vegetables that arrived in the city the preceding evening: apples, bananas, carrots, cucumbers, lettuce, onions, potatoes, tomatoes, grapefruit, oranges, peaches, watermelons, plantains, and pineapples.

Three meals on June 6 for New York's millions would have exhausted the supplies of avocadoes, artichokes, lima beans, snap beans, beets, broccoli, cabbage, celery, parsley, apricots, and plums by nightfall.

Cold storage plants could have been relied upon to supply a few days' supplies of berries, cherries, asparagus, beans, and spinach.

By the end of the week practically all fresh fruits and vegetables would have disappeared except potatoes, pineapples, and bananas.

Poultry supplies would have lasted 3 weeks.

There would have been bread for a month, but as all the important ingredients except flour ran out, the bread would have been debased in quality until it disappeared altogether.

In general such an if-hap would have left the city with food enough to supply a week's diet in an ever-narrowing range. After 2 weeks, there would have been little left except canned fruits and vegetables and black coffee.

But that would only be one-half the calamity.

If New York lost its food supplies, the food suppliers would lose their largest market for food.

THE TROUBLE THAT WOULD HIT AMERICA cannot be comprehended simply by saying that the half-million farmers and farm workers who work full time to feed and clothe New York would have become suddenly unemployed. Literally billions of dollars are invested in farms, railroads, produce houses, trucking lines, banks, boats, and highways for the sole purpose of feeding New York.

If, of a sudden, it ceased to be possible to feed New York, piles of produce would erupt mountain-high in every distribution center of the country; warehouses would bulge outward with surpluses; railroads and highways would be congested with undeliverable merchandise; prices of farm products would plummet toward bankruptcy. The food that's moved so expeditiously (by and large) through the arteries leading to New York would suddenly back up with glacial relentlessness.

The point is, there is an inescapable interdependence between New York and millions of farmers and farm workers all over the country, and it shouldn't be necessary to have a toothache for more people to realize it.

Foodlore and Facts

SCIENCE HAS A WAY of catching up on folk remedies and showing them up as fallacies. Sometimes, however, science looks into a folk remedy and discovers that some wise old observer has really hit on something.

Back in the 13th century, for example, when they burned witches every time there was an epidemic, they also used burned sponges to treat goiter. In the year 1819 scientists discovered that burned sponges contained iodine. More recently physicians and nutrition workers here learned through their work in clinics and laboratories that traces of iodine in the diet help prevent goiter. Whether any of the iodine from fumes had a beneficial effect on the people affected with goiter is hard to say. If it did, that's a score for the ancestors.

In the Middle Ages in Florence, while people still went down on their knees with terror every time there was an eclipse, pharmacists sold lemonade as a remedy for scurvy. Years later, in our own time, nutrition scientists proved that these pharmacists had hit upon something. Not only lemons but other citrus fruits are practical eldorados of Vitamin C. Of course, it is the Vitamin C in these fruits that does the sharpshooting against scurvy but even more importantly Vitamin C gives the body a substance it must have in sufficient quantity to keep well and vigorous. We now know that a medium-sized orange or half a large grapefruit gives us a large proportion of the Vitamin C we need for the day.

Folk fallacy, however, is the term applied to lore that doesn't bear up under scientific analysis. Take something like rich milk. Rich milk to most people means milk that's rich in fat. Skim milk, on the other hand, to most people means milk that is anything but rich. What they mean is that skim milk is not rich in fat.

But if you were talking richness in nutritional value, skim milk is anything but poor. Say the dietitians, it is just as rich as whole milk in protein and in the much needed calcium, and in all the other important diet elements contained, except fat and Vitamins A and D.

Because people don't prize it, skim milk is inadequately used, in some cases wasted, and thus consumers and farmers both lose out. Consumers lose out, of course, on an important source of dietary wealth, and farmers lose out because there is practically no market for the intrinsically valuable skim milk.

SCIENTIFIC investigation of vitamins was begun only some 25 years ago, but results have already revolutionized our understanding of the tremendous importance of balanced diets to human health and efficiency. Here a nutrition chemist in the BHE is measuring the Vitamin C (ascorbic acid) content of grapefruit juice.

CONSUMERS have their say at a Government hearing on how to get larger incomes for farmers and more milk to consumers. (1) This group spent many months learning about milk and preparing their case. (2) No lawyer, the group's spokesman, nevertheless, was able to present the brief the committee had drawn up. (3) ". . . the truth, the whole truth, and nothing but the truth." (4) One of Washington's largest milk consumers, attended by his mother, arrives. (5) Farmers and lawyers question the consumer spokesman.

Milk Consumers Speak Up

When hearings were held recently in Washington on a proposed marketing agreement for milk, producers and distributors were there, and so were consumers. Not often heard yet in business-government councils, organized consumers are beginning to learn their new responsibility to help in building for greater abundance

THE 2-YEAR OLD WHO TODDLED beside his mother into the hearing room was certainly no lawyer. And he obviously was neither producer nor distributor of milk.

What, then, could he be doing at a "hearing with respect to a proposed marketing agreement and proposed order regulating the handling of milk in the Washington marketing area?"

Classify him if you must as "Exhibit A." He was, as anyone could see, a milk consumer—probably the biggest potential milk consumer in that whole audience of lawyers, farmers, milk handlers, consumers, and Government representatives who had come together to discuss the price of milk paid to dairy farmers supplying the Washington area.

The hearing must have been the dullest thing possible for this young consumer whose world was one of teddy bears and toy blocks. But for him and his mother, what happened in that room had a lot to do with the future size of his glass of milk.

So important was their problem that his mother had asked for a chance to talk about it. She wanted to be a witness—a consumer witness—before this assemblage which for 3 days had been probing into the economic maze of "butterfat differentials," "individual handler pool," "Class I, Class II, and Class III of milk,"—and everything else that had to do with the marketing of this precious food from farm to city.

Only a beginner in the complicated economics of milk, there was one thing this young mother knew about milk. It had not been mentioned often in the 3 days of testifying and cross-examination. She knew that her budget and the health of her son depended a great deal on what the Secretary of Agriculture should finally decide was a fair price for the milk which distributors

bought from farmers in the outlying districts. As a consumer, she believed that if the price of milk went down, she could buy more; if it went up, she would buy less. That was her story—and it didn't take her more than 5 minutes to tell it.

SHE CAME, SHE SAID, AS THE SPOKESMAN for a group of her neighbors; women like her with children like hers who were very anxious to know how these hearings at the Department of Agriculture would affect the price they paid for a quart of milk.

"We read about this marketing agreement in the newspapers and we became rather alarmed to think that perhaps the price of milk, the price we are now paying for milk, might be more, if this agreement went through," she said. "We already pay more for milk than we can afford, and we need much more milk than we are buying.

"If the retail price of milk goes up," she warned, "we will have less, we will be able to buy less fluid milk, and we will have to buy evaporated milk; and if the price goes down, of course, we can have that much more milk."

With that, she sat down. The record doesn't contain the fact, but she had done her bit in helping to make consumer history.

She was one consumer who was facing realistically the fact that prices of goods consumers buy nowadays are not always decided over the counter by buyer and seller. Sometimes prices are decided long before goods come to market, and consumers have only the choice of paying the price or going without the goods. Sometimes it is government that steps in and fixes prices. When government does this, it usually does what industry does not do. It holds public hearings to which everyone interested is invited to come and speak their minds about what prices should be. From the testimony of people who appear at public hearings and from facts marshaled by experts, some government authority makes a decision about a price which people are required to respect.

THIS IS WHAT HAPPENS IN THE CASE OF milk that is sold by farmers across State lines. In 1933, Congress passed a law saying, in effect, that the marketing of some foods was in such a topsy-turvy state that the Government should do something about it. One of the things which Congress, in this law, decided should be done was to give the Secretary of Agriculture power to fix minimum prices which distributors should pay to dairy farmers who sell their milk from one State to another.

Congress laid down some rules and regulations about how this power was to be used. One of the most important was the rule that hearings should be held before any price was fixed, and that anybody who had an interest in such a price should be permitted to appear and give testimony. Another rule was that such testimony should be considered by the Secretary of Agriculture before he makes his decision about prices.

That's the law which drew this young mother and her 2-year-old into the auditorium of the Department of Agriculture a short time ago.

When she spoke her bit before the Secretary's representative, she was casting her vote on the prices proposed for farmers who supply milk to the stores and the homes of Washington's consumers. Before she ever appeared to testify she had been doing some tall thinking and exploring in the maze of milk economies.

IT STARTED MORE THAN A HALF YEAR AGO when a group of Washington consumers—some as individuals, others as representatives of clubs and civic groups—met one day to discuss the problem of milk in the District of Columbia.

Milk, they said, was an essential food—almost as essential as proper housing or an adequate transportation system to serve the city. They observed there were some Washington consumers, thousands of them, who either weren't buying all the milk they could use, or were suffering under-nourishment because of their inability to buy even a small percentage of the milk that nutritionists say grownups and children alike need in order to meet minimum health standards. They learned, too, that farmers producing milk for Washington's consumers were unsatisfied with the returns they got for their efforts.

Sixty minutes discussion on the whys and wherefores of this situation settled only one point: These consumers must be something more than round-table talkers if they were going to help untangle this baffling problem of getting more milk to more consumers and more returns to farmers. They must know more of the facts behind the scene. That is exactly what they set out to find.

FIRST STAGE IN THEIR QUEST FOR FACTS LED not to a farm but to the local offices of the City Health Department. There they learned the rules which the Health Department has laid down regulating the production of all milk that may be sold in the District. They found that some of these rules, while protecting the health of milk consumers, imposed heavy expenditures on the farmer for equipment and labor—expenditures that push up the cost of producing milk.

Discovering these facts led to questions. Such questions as these: Are the health regulations more stringent than necessary for health protection? Do they justify the expense to the farmers, and therefore the cost to consumers? Finding answers to these questions meant comparing Washington's milk regulations with those of other cities and setting them against the model law developed by the United States Public Health Service.

COSTS OF PRODUCTION ALSO HAVE MUCH TO do with the prosperity of the dairy farmers and therefore with the supply of milk available to consumers. There are feeds to be bought, barns to be built and maintained, equipment to be acquired and kept in condition, sometimes labor to be hired. These and other costs, they found, face the producer of milk and must be met before he can buy clothes for his family, if he is to stay in business.

From there the trail led to the distributing end of the set-up. Here, these consumer-explorers discovered something they had not known before. All the milk that came from a cow did not always bring the same price to the farmer. They found that milk was classified and paid for according to the use to which it was put by the dairy buying it: The highest price going for milk sold in bottles, a lower price for milk to be used in making cream, and a still lower price for milk to be used in other ways.

"Classification"—a new word in these consumers' vocabularies—had its advantages and disadvantages for the farmer, the investigators discovered, but what interests the farmer most is getting a good "blended"—or average—price for all the milk he sells.

PONDERING THIS PROBLEM, THESE CONSUMers debated various ways by which this blended price might be raised. One way would be to increase the price of Class I milk, the kind used for bottling. But such an increase, while it might bring greater returns per quart, would most certainly reduce the number of quarts of bottled milk sold, they decided, since milk was already too expensive for low-income families. Higher prices, these consumers said, can actually mean lower income to farmers.

Just the opposite idea was then explored. How about a lower price for Class I milk, they asked themselves. Might not that result in more milk being sold at the Class I price, and less milk at the much lower Class II and III prices? If that happened, might

not the average or "blended" price actually be raised?

These were not idle questions. The consumers who asked them earnestly went in search of the answers.

When the Secretary of Agriculture announced he was to hold a hearing on milk sold in the District of Columbia, they were on their toes, eager to give their testimony.

The law gives the Secretary power to call such a hearing when a group of producers request it, and also authorizes him to set minimum prices for the milk distributors buy from producers. Those prices, Congress said, should be high enough to insure an adequate supply of milk for the market, and to give the farmer a purchasing power equal to what he had over a designated period of years.

A FARMERS' COOPERATIVE IN THE WASHINGton area asked for such a hearing to stabilize milk prices at approximately their current levels and do away with disorder in the market. They submitted a draft of their own proposals which were to form the basis of discussion by farmers, distributors, and consumers.

We would like, they said, to have 3 classes of milk, with prices legally set which must be paid by all dairies serving Washington to all farmers who sell milk to them.

Class I milk would include all milk sold to consumers as fluid milk, chocolate milk, or whole-milk drinks. For this, the farmers thought, $3.17 a hundredweight (or nearly 7½ cents a quart) would be a fair price.

Class II milk would be all the milk used for making cream, buttermilk, cottage cheese, and milk not used in either of the other 2 classes. For this they proposed $1.98 a hundredweight (about 4.3 cents a quart).

In addition, producers whose farms met certain standards would receive premium payments which would average about 33 cents a hundredweight on Class I and Class II milk.

Class III would be all the milk that goes into the manufacture of ice cream. Price of this would be determined by a formula based on butter prices.

Also, on Class I and Class II milk the producers proposed that an additional 6 cents per hundredweight, more or less, should be paid for each one-tenth of 1 percent of butterfat above or below 4 percent which their milk scored.

And, finally, the dairy farmers suggested that they would accept $2.71 per hundredweight (about 6 cents a quart) for Class I milk sold under a relief program to "low-income families, including persons on relief."

THAT, ROUGHLY, WAS THEIR PROPOSAL. The law does not provide for setting retail prices of milk, but consumers realized that a drop or a jump in the producer price might be reflected in their individual milk bills.

To this proposal, the dairies who bottled the milk and distributed it to consumers offered a counter-argument. First, they asked that flavored-milk drinks be taken out of Class I and be included in milk sold as Class II. And in Class III, they wanted to include all milk not specifically used for the purposes set up in Class I and Class II.

They also asked that price of the Class I milk be cut to $2.71 a hundredweight—a cut of about one cent a quart—in the spring when feed costs would go down for the farmers. "The handlers feel that this reduction should be made in order that consumers may have the opportunity of purchasing milk in the Washington market at 1 cent per quart less than that now in effect," their brief said. But the dairies themselves did not indicate they were ready to cut prices to consumers further by reducing their own margin.

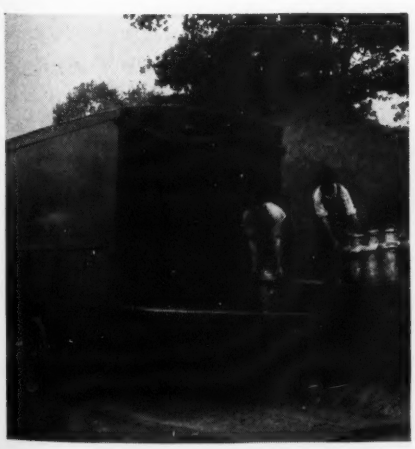
For Class II and Class III milk they asked no set price but suggested two separate formulas dependent on the price of butter in Chicago, and the price of Philadelphia sweet cream.

Milk for relief families should be priced at $2.71 until the spring months and then cut to $2.25, the dairies declared. They asked that "low-income groups" be withdrawn from the relief milk proposal "because of the difficulty in determining what constitutes low-income groups."

THIS, THEN, WAS THE SITUATION WHICH faced the consumers when it came their turn to say what they felt should be done to protect the consumer end of the milk stream and to increase the sale of milk.

They went into the hearing armed with the results of all their months of investigating. They did not presume to be experts or authorities on the subject of milk. They were the first to concede their apprenticeship. But they had made a start, and from that beginning they set out to convince the others that

HERE ARE three little pictures of what goes into the price of a quart of milk. First, there is the farmer who must be paid for his labor and the upkeep on a herd of cows. Then comes the dairy which pasteurizes the milk and puts it into bottles. And finally, there is the cost of delivering the bottled milk from dairy to doorstep in time for breakfast. Many consumers believe that on the distributing end of the setup there is the most room for economy.



consumers had as big—if not bigger—an interest in the ultimate outcome of the hearings as anyone else. As he is authorized to do, the Consumers' Counsel, of the Department of Agriculture, offered them advice and help when that was needed.

Like the producers and distributors, they presented their own brief, giving their views and arguments on the proposed marketing agreement, as it would affect consumers. They gave facts on the consumption of milk in the city. They pointed out that milk prices had decreased less than the prices of other foods from 1931 to 1939. They told the hearing that in only 10 out of 120 milk markets was the price of a quart of milk higher than in Washington, and made the point that sales were likely to fall under the pressure of high prices, while population figures were going up. They warned that evaporated milk at 7 cents a can was displacing much of the farmers' market for fresh whole milk.

When it came time to advance their solution for Washington's milk problem, they proposed as one measure that producers accept a cut of 1 cent a quart in the price paid producers for Class I milk. To such a proposal, the producers were quick to protest. But the consumers defended such a price cut by maintaining that a lower price would mean greater sales.

"We sincerely believe," they argued, "that any program on behalf of Washington consumers of fluid milk can be made also into a program on behalf of producers. And we are convinced that a continuation of present methods of pricing and selling milk in this city will deprive many consumers of milk they need, will drive increasing numbers of them to use evaporated instead of fluid milk, and will create conditions in this market that will make it increasingly impossible for milk producers to make a decent living."

THEY MAINTAINED THAT THE PRICE OF A quart of milk could be cut by as much as 3 cents in Washington "by methods by which dealers in other cities handle milk at lower margins than those in effect in Washington." As a starter, they told dealers that (1) milk sold in stores should be priced at 2 cents a quart less than the price of milk delivered to the door; (2) discounts should be allowed for milk bought in quantity; (3) half-gallon or gallon containers and alternate delivery days be provided so as to permit economies in delivery; (4) the local milk ordinance should be revised so as to remove the restrictions that are costly to farmers and are unnecessary to assure protection to consumers; (5) a bottle deposit and paper containers be provided so as to lower handling costs; and (6) distributors should accept a narrower margin in order to increase total sales.

Increasing the sales of milk is just as effective a method of increasing income to farmers as keeping up the price of milk to consumers, their argument concluded.

Like the others, these consumers were questioned and cross-examined on their evidence, and asked to amplify certain points.

This was their testimony. Consumer testimony. Against it, the record showed the testimony of producers and distributors. It remained now for the milk experts of the Department of Agriculture to summarize and add their recommendations, and then to turn the record over to the Secretary of Agriculture for final decision.

Perhaps the proper climax of this story is the Secretary's decision, telling who won what. But the hearing and the milk order provide another climax to this tale. They dramatize the new rôle consumers are playing in the Nation's and community's economic affairs.

DISTRIBUTION COSTS for milk sold over the counter are less than for milk delivered to the doorstep. These economies should be passed on to consumers through lower prices for over-the-counter milk according to the housewives who testified at the Washington hearing.

NEARLY 5 YEARS AGO, THE SECRETARY OF Agriculture stated in a broadcast: "It has been one of our disappointments that so few consumers, either in person or by representatives, have taken part in the many hearings the AAA has held. . . . I assure you that the problem of administration would be much simpler if these producer programs could be discussed at the hearings by representative, fair-minded, unprejudiced consumers."

Slowly but surely consumers are now showing an awareness of the need for their speaking up whenever producers and distributors get together with government to decide questions affecting the price consumers must pay for goods and services, or the quality of those goods and services, or the quantity of goods and services that come to market.

In support of this new expression of consumers, the Secretary has said: "I think consumer organizations will not only add to their own accomplishment but will help different groups to find out how they can work together. . . In all of this (the effort to attain continuous balanced expansion of production) it seems to me that organized consumers can be a very real help . . . I am convinced organized consumers will play a larger and larger part in the national scheme of things."

Inside the Coffee Pot

The Food and Drug Administration stands guard at American ports of entry to protect America's coffee pot from adulterated coffee

TEA HAS AN HONORED PLACE in American history but coffee played a role, too, in the founding of the United States. In the year 1774 a group of patriots in New York City, members of the Committee of Correspondence, gathered in the Merchants Coffee House, a block from the docks where the high-decked, tall-masted merchant vessels lay at anchor in the harbor, and drafted a letter to a group of Boston patriots in which a union of the American colonies was proposed.

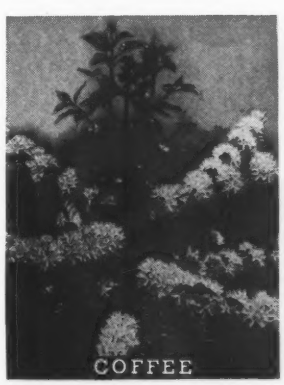
Fifteen years later the Merchants Coffee House was decked out in flags. Down the street the harbor was filled with small boats flying the bright new flag of the United States. Inside the coffee house a group of solemn men, some of whom had helped draft the letter back in 1774, arranged themselves formally in anticipation of the moment when General George Washington would ride up to the coffee house, and step down to hear the official greeting which awaited him as President-elect of the United States of America.

COFFEE IS HISTORIC, YOU MIGHT SAY, AND the historic dates have a curiosity value. First mentioned in literature sometime around the year 900 by an Arabian physician, coffee, according to legend, was first used as a beverage in 1258.

Not until 1625 did it become known that sugar has its merits in a cup of coffee. Then in 1660, the Dutch ambassador to China ingeniously thought of adding milk to his sweetened coffee.

An American scientist, Count Rumford (Benjamin Thompson), invented the percolator in 1806.

For Americans, perhaps the most important other date in coffee history is 1906, the year the Federal Food and Drugs Act was passed.



MEN, WOMEN, AND CHILDREN gather the ripe reddish purple coffee cherries on coffee plantations throughout the tropical and subtropical world during most of the year. After picking, the coffee is cleaned, washed in streams of water, permitted to ferment, dried, hulled by machine, bagged, and finally loaded onto ships.

Long before this Act was passed, some ingenious sharper first discovered that coffee could be adulterated with chicory. Chicory has its partisans. There are many people who believe that chicory added to coffee improves its flavor. There are others who prefer chicory to coffee. Concerned less about flavor and more about the profits to be clipped by adulterating coffee with chicory, some dealers before the passage of the Food and Drugs Act in 1906 mixed the 2 and sold the mixture with no mention of the chicory content.

Nor was chicory all. A New York newspaper in 1890 estimated that between 96 and 120 million pounds of bogus coffee were sold each year in the United States at an annual profit of 18 million dollars to the sophisticators. One factory produced an imitation coffee from rye flour, glucose, and water. The most successful imitation coffee factory produced 10,000 pounds of pseudo-coffee a week.

IN THE UNITED STATES, JANUARY 1, 1907, marked a New Year and a new deal for the coffee consumer. On that day the Federal Food and Drugs Act took effect and the result was quickly apparent in the Nation's coffee pot.

Coffee substitutes could still be sold after the law was passed (and can be sold today), but after the food and drugs law began to operate they had to be sold as coffee substitutes and not as coffee.

The decisive role the Food and Drug Administration played is apparent in its rulings. An early ruling, for example, kept out of the United States coffee from Europe and other places which had been coated with lead chromate and similar poisonous chemicals to improve its appearance.

It also became illegal to import into the United States blackjack coffee, that is, coffee of a very low grade with a large proportion of decomposed beans.

Any practice, in fact, which tended to make coffee appear to be better than it was, or which concealed inferiority, was put on a legal unfair list.

Finally, misrepresentation of the variety of coffee offered for sale was also forbidden.

Java and Mocha, for example, are highly venerated coffee names and before the Food and Drugs Act was passed almost anything that resembled coffee was called Java or Mocha coffee.

After the passage of the Act, Java coffee meant coffee which was grown on the Island of Java, while Mocha coffee meant coffee which was grown in the province of Yemen in Arabia.

One corner cutter, after this ruling, called a blend of coffee he sold, Javocha. When hailed into court he admitted that his coffee had never seen either Java or Arabia. Instead he explained to a skeptical judge and jury that Javocha was an acrostic which honestly and carefully told consumers where the coffees in the blend originated. JA, he said, stood for Jamaica; V for Venezuela; O for Colombia; CH for Chiapas, a State in Mexico; and A—here the acrostic broke down for A stood for Guatemala.

Prior to the passage of the Food, Drug, and Cosmetic Act of 1938, there was no definition of coffee in law, nor did the Food and Drug Administration have authority to establish one. As a basis for its proceedings against adulterated coffees, the Food and Drug Administration did issue a regulation which defined coffee, but this definition was only advisory and had no legal weight.

Under it the Food and Drug Administration announced that it regarded coffee as the "seed of the cultivated varieties of Coffea arabaica, Coffea liberica, and Coffea robusta."

Green coffee, it understood to be raw, unroasted coffee, while roasted coffee was considered properly cleaned, green coffee which "by the action of heat (roasting) has become brown and has developed its characteristic aroma."

UNDER THE NEW FOOD, DRUG, AND COSmetic Act of 1938, the Food and Drug Administration may promulgate a reasonable definition and standard of identity, a reasonable standard of quality, and/or reasonable standards of fill of container which do have the force of law.

The staff of the Food and Drug Administration is limited, however, and the number of food products are many, so that to date the Food and Drug Administration has not got around to fixing standards for coffee, though, in due time, it probably will.

While the Food and Drug Administration has established no minimum quality standards for coffee, as part of its routine activities it keeps an eye on all coffee imports.

Coffee, after it is imported, also remains under the surveillance of the Food and Drug

COFFEE FILTERS into the United States through the gangways of ocean-going steamers, like this one, at the rate of 2 billion pounds a year. If everyone, man, woman, and child, got an equal share that would make 15 pounds (unroasted) apiece. More than half this coffee comes from Brazil. Second and third largest coffee suppliers are Colombia and El Salvador.

Administration so long as it remains in interstate commerce.

Recently an inspector in New York City, making his rounds through one of the fragrant warehouses in the spice and coffee district, encountered 100 bags of coffee which contained what the Food and Drug Administration called an excessive number of worthless beans. On information supplied by the Food and Drug Administration, the Federal district court ordered this coffee held for trial. At the trial the owner of the coffee turned up and admitted the coffee was below par. The court then ruled that he could have his coffee back provided he sieved out the bad beans and destroyed them. Pending the destruction of the inferior coffee, the importer posted a bond.

TWO BILLION POUNDS OF COFFEE EACH YEAR are tablespooned into America's coffee pot—so aromatic in the morning. More than half these 2 billion pounds of coffee are hauled down the sides of the great Brazilian plateau to the ports for shipment to American cities. From April to August, men and women slowly work their way from coffee shrub to coffee shrub, gathering the ripe red coffee cherries in sacks or baskets or pails. The coffee cherries grow in clusters around the base of the stems of bright green, oval leaves on shrubs which range from man-height to three times the height of a man. Like other tropical trees the coffee shrub bears flowers, green fruit, and ripe fruit all at the same time. During picking season only a few of the honeysuckle-like white flowers remain; enough, however, to fill the dry plateau air with a faint jasmine scent.

After the coffee is gathered, the red skin of the coffee cherry is removed along with a fruity pulp and a silvery parchment to disclose two green coffee beans. These beans, polished, sorted by sizes, and sacked, are the coffee of commerce.

In the United States the coffee is poured out of its sacks into other sorting machines where further sizing takes place, and then by suction it is carried along to a milling machine which cleans it. Some time later different varieties of coffee are blended together by dealers' formulas, and then the coffee is roasted in perforated cylinders which rotate before a furnace giving off a steady heat. This is the brown, genial Humpty-Dumpty looking coffee bean consumers know.

COFFEE ISN'T BOUGHT FOR ITS FOOD VALUE. Before the ancient Arabians discovered that a stimulating flavorful drink could be made out of it, they ground it up, rolled grease into it, and ate it. That way it was a food. Today, however, people look to fruits, vegetables, meats, fish, and dairy products for food, and know that coffee brew has no food value. Those who use cream and sugar in their coffee, of course, have added a little food value, mainly calories. But all that the coffee drinker asks of coffee is that it be stimulating, fragrant, and flavorful.

Roughly these virtues in a cup of coffee depend upon the variety of the coffee, the way it is roasted, its freshness, and the way it is made.

Of these four criteria, paramount factors are freshness and the method of preparation.

Coffee, by American usage, generally falls into two classifications: Brazilian coffee and mild coffee, the word mild here meaning not gentle or bland, but rather anything that isn't Brazilian. As a matter of import statistics, it means coffee from Colombia, El Salvador, Mexico, Guatemala, British East Africa, and Venezuela, the six next most important sources of America's coffee after Brazil. To a lesser degree it means coffee from the Dutch East Indies, Arabia, Puerto Rico, Hawaii, and most of the other regions that fall between the tropics of Capricorn and Cancer.

BY FLAVOR AND SAVOR, COFFEE DIVIDES again into four general classes: neutral, sweet, acidy, and bitter. Taking these tastes as compass points, brown Bogota coffee from Colombia, brown Santos from Brazil, and most of the East Indian coffees usually lie in the bitter region of the taste map.

The rich, heavy-bodied, fragrant Mocha coffee is the acidy arch-type, while Mexican, Costa Rican, and Guatemalan coffee fall in the same taste constellation.

The run-of-the-crop Brazils are neutral-flavored while the Brazilian red Santos, the Haitian, and Santo Domingo coffees are sweet.

As a matter of cup practice, however, coffee is not sold straight. Coffee blenders, men with sensitive palates and noses trained to detect subtle fragrances, take different varieties of coffee and combine them to get a

[Concluded on page 15]

FIRST PERSON to greet a bag of visiting coffee in the United States, after it passes customs, is an inspector from the Federal Food and Drug Administration who rejects all inferior and adulterated coffee.

COFFEE BLENDERS with educated palates and noses trained to respond to delicate fragrances combine the different varieties of coffee into the blends consumers finally measure out for their morning coffee.

YOUR FOOD SUPPLIES AND COSTS

FOOD SUPPLIES

BEFORE WAR BROKE OUT in Europe America's food basket was costing consumers less than it had cost for practically 5 years. Some foods were cheaper than they had been since 1933.

When war was declared, consumers felt the shock in higher costs for some important foods. Prices of meats, fats and oils, cereals, dried beans, and sugar moved up. Lard prices jumped the most—35 percent. Sugar and dried beans advanced the next largest amounts—25 and 20 percent.

Eggs and dairy products moved up, too, in the fall, but they usually do at that season.

Both pressures lifted the cost of foods in general 5 percent in the short space of one month.

Then came the turn. It started in late September and kept up through mid-January. By that time, food costs had dropped to about 3 percent above their pre-war level.

Not all foods joined this downward price parade. Flour and canned salmon, after their first jump in September, continued to move up slowly. Evaporated milk advanced in price about a half cent a tall tin. Bread prices increased in a number of eastern cities in January. Prices of most dairy products and vegetables advanced seasonally through the early winter months.

Other foods not only lost all of their September increase, but in January actually cost less than before the war. Prices of pork, beef, and lamb dropped considerably after September.

Still other foods, between these two groups, lost some of the September increase, but not all. Lard and sugar and canned tomato prices in January were only a little above their pre-war level. About half the September increase in navy bean prices had been canceled.

Even in years when there is no war pressing on food supplies, food costs are usually slightly higher in midwinter than late summer. Dairy products, eggs, and vegetables, for instance, help to push up winter costs. So with January's food basket costing 3 percent more than last August's, it is still low compared with other Januarys since the depression. In fact, this January's costs are below those of any January since 1934.

For every dollar workers spent for food in the 3 years 1923–1925, they spent only 77 cents to get the same foods in January 1940. Back in January 1929, the same foods cost $1.03. In January 1933, they cost 63 cents.

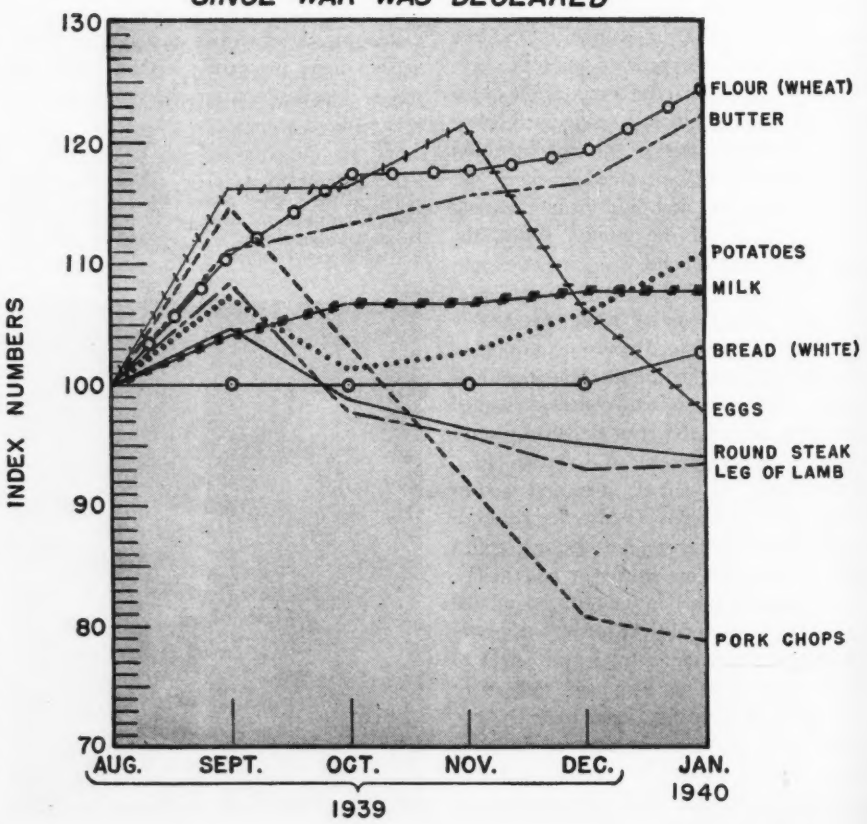
As we go to press, reports come from the South telling of damage done to winter vegetables by freeze. During March, most of our home-grown tender vegetables come from this area. The ones which have been most severely damaged are snap beans, tomatoes, peppers, new potatoes, and cucumbers. Of course, when freeze badly cuts down supplies of most winter vegetables, the country draws more heavily on foreign-grown produce, and on canned and frozen supplies.

More meats are expected to come to market in March and April than came a year ago. The big increase will be in pork products and better-grade beef. Consumers could buy a pound of pork chops at an average price of 23 cents in February. This meat hasn't been as cheap as that in February since 1933. Lamb supplies will be about the same as in March and April 1939. Lower-grade beef will probably not be as plentiful.

As to fruit supplies, citrus crops also were hit by the freeze of late January. In fact the damage is expected to cut remaining supplies of winter oranges about a third under a year ago. Grapefruit supplies were hurt to about the same degree. Summer oranges which come to market mainly after mid-May were not affected by the freeze, and they are expected to be a little less abundant than in 1939.

Scarcity of strawberries on markets during February was entirely due to this freeze which punished the South. More berries will come to market in March and April, but city markets will not see as many as a year ago.

A CLOSE-UP OF FOOD PRICE CHANGES SINCE WAR WAS DECLARED



HERE ARE THE FIGURES

Now you can complete the charts on food costs which appeared in the October 15, 1939, issue. Using these figures, continue the heavy black lines showing on each chart on pages 14 and 15. This line represents the average actual cost of each food throughout the country.

Food	*Sept.*	*Oct.*	*Nov.*	*Dec.*
	Cents	*Cents*	*Cents*	*Cents*
Eggs, 1 doz.	38	38	40	35
Round steak, 1 lb. .	38	36	35	35
Pork chops, 1 lb. . .	35	32	28	25
Lard, 1 lb.	13	12	11	10
Milk, 1 qt.	12.5	13	12.5	13
Butter, 1 lb.	34	35	36	36
White bread, 1 lb. .	8	8	8	8
Potatoes, 1 lb.	2.4	2.3	2.3	2.4

Cost of living figures for December 1939 have just been released, also, so you can complete the charts on pages 14 and 15 of the November 1 issue. These figures are percentages. Each one represents a comparison with 1925–29 costs, which stand for 100. When you draw each bar for September and December 1939, note that the bottom line starts at 60.

Item	*Sept.*	*Dec.*
Food	75.1	73.1
Clothing	84.9	85.6
Rent	70.7	70.7
House furnishings .	89.0	90.2
Fuel and light	86.0	87.1
Other things	97.0	96.7

INSIDE THE COFFEE POT

[Concluded from page 13]

flavor that more or less meets with consumer approval on different price levels.

Coffee distributors try successfully to keep the quality of their blends constant from year to year. By manipulating the kinds of coffee they use in their blends they can keep the final blend steady even when the supplies of a particular constituent of their blend fail.

Blend of coffee, however, is only one of the factors in an acceptable cup of coffee. A second factor, not necessarily second in importance any more than the blend is first in importance, is the roast.

Before roasting, coffee is simply a fibrous, almost flavorless, tough, indifferent kind of product with practically none of the virtues coffee connoisseurs hymn. It's the roasting that loads the bean with its fragrance, that makes the coffee district in a city aromatic, the people in the neighborhood nostalgic, and the bean crisp and brown. During the roasting the heat induces a series of wonderful changes in the chemistry, the color, the smell, and the size of the coffee bean. Smoke shimmers up from the roasting, the beans begin to swell and sweat oil, some of the caffeine in the beans is transformed into gas and driven off. Water is evaporated from the bean. Sugar in the bean caramelizes to give the bean its brown color. The caffeine, sugar, and the substances called caffeinic acids in the coffee blend together to form an oil which chemists, for lack of precise knowledge, dub caffeol, the source of the coffee fragrance. Corresponding to rare, medium, and well done in meat, the coffee roasts are light, cinnamon, medium, high, city, full city, French, and Italian, depending upon the length of the time the coffee is roasted, the temperature, and the degree to which the coffee is agitated.

Under-roasted coffee makes a flat brew, with a wry green flavor. Over-roasted coffee tastes burnt and bitter. Generally, the darker the roast, the less caffeine the coffee contains, and the more pungent the brew.

The kind of roast you get depends upon where you live. Along the Atlantic seaboard a medium-colored roast is the rule. On the Pacific coast you're likely to get a light roast. In the South you'll probably get coffee roasted very dark.

Until coffee is roasted, aging actually improves most varieties. After roasting all coffees begin to deteriorate. The aroma and flavor of coffee are due, of course, to the compounds resulting from the roasting. After roasting and grinding, however, these volatile compounds dissipate themselves in gas. It has been estimated that after 2 weeks, for example, when exposed to the air half the strength of coffee evaporates.

Actually, in kitchens no one computes the age of the coffee, so once it is bought, the coffee that is served gets progressively worse until it is used up. On the other hand, if an attempt were made to maintain the flavor of the coffee by increasing the amount used, the caffeine content would rise as the dose increased because while the coffee flavor goes up in gas, the caffeine remains.

Senile coffee, that is ground coffee over 2 weeks old and exposed to the air, also has another disadvantage. After a while substances in the coffee begin to oxidize, producing an off flavor which, however, is not harmful.

Short of roasting and grinding coffee at home, there are a number of ways to win out against the hazard of stale coffee.

You can inquire around until you find a store that sells freshly roasted coffee. In that case, you don't have to insist on vacuum packing, but if you do that you should be sure not to buy more than 3 or 4 days' supply of coffee at the most. It may cost a little bit more to buy the smaller quantity but the cost per cup of coffee in the end will be less.

Theoretically, coffee kept in a cold place should grow stale slower than coffee kept in a warm place. Actually, no experiments have verified this theory. It isn't necessary, therefore, to keep coffee in the refrigerator, but it is not a good idea to keep coffee on the shelf above the stove where the container is likely to get heated.

Guiding principles in coffee making are few. First the coffee pot must be clean, immaculately clean, despite the labor-saving myth to the effect that rinsing is enough for a coffee pot. Second, measure the coffee and water carefully, and once you have found the combination which suits your palate, stick to it. Third, the coffee should not be boiled. Boiling drives off aroma and the flavor which are the fundamentals of coffee taste, and the longer coffee boils the more bitter and less fragrant it becomes. Properly made "boiled" coffee is really steeped, that is, the boiling water is poured over the coffee and kept hot, but not by boiling, until the desired flavor is obtained.

Experts say the best way to make coffee is by the drip method, a method in which water that has been heated to the boiling point is poured or permitted to drip over finely ground coffee. Something else to recommend this method is the fact that it produces a better brew with less coffee.

APR 17 1940

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WORLD WAR II